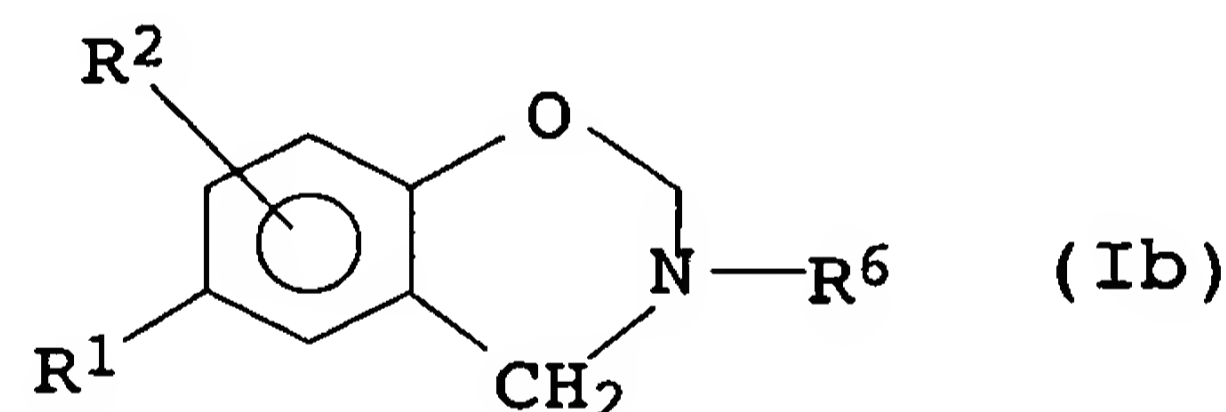
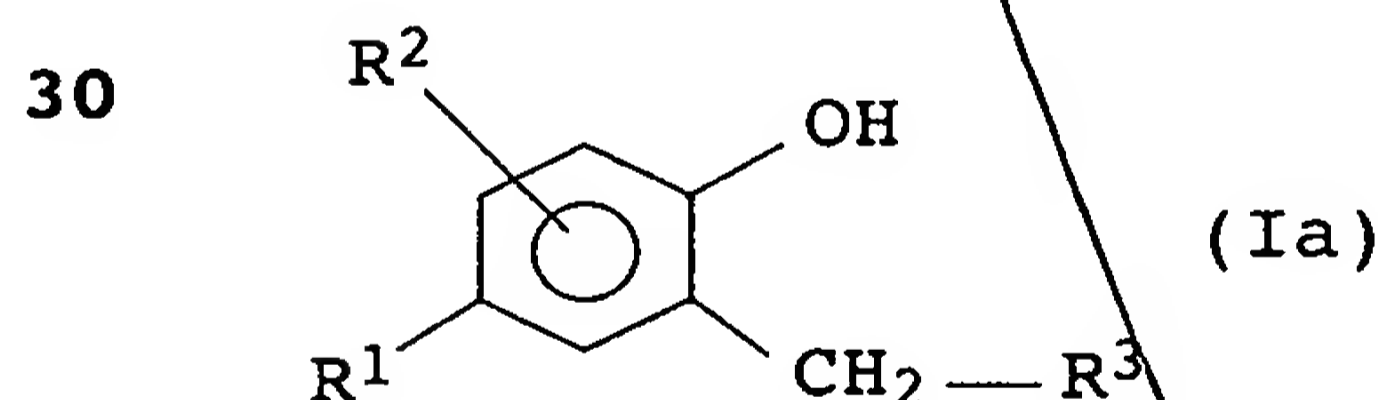


We claim:

1. A process for the preparation of polyisobutenylphenol-  
 5 containing Mannich adducts by
- a) alkylation of a phenol with highly reactive polyisobutene  
 having a number average molecular weight of less than  
 1000 and a polydispersity of less than 3.0 at below about  
 10 50°C in the presence of an alkylation catalyst;
- b) reaction of the reaction product from a) with
- b1) an aldehyde chosen from formaldehyde, an oligomer and a  
 15 polymer of formaldehyde and
- b2) at least one amine which has at least one primary or at  
 least one secondary amino function.

- 20 2. A process as claimed in claim 1, wherein the amine used is  
 3-(dimethylamino)-n-propylamine,  
 di[3-(dimethylamino)-n-propyl]amine, dimethylamine,  
 diethylamine or morpholine.
- 25 3. A process as claimed in either of claims 1 and 2, wherein an  
 adduct mixture is obtained which comprises at least 40 mol%  
 of compounds of the formula Ia and/or Ib,

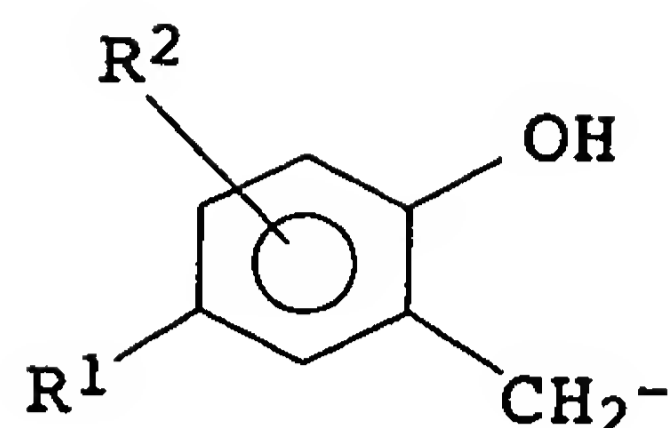


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where

- $R^1$  is a terminally bonded polyisobutenyl radical,  
 $R^2$  is H,  $C_1$ - to  $C_{20}$ -alkyl,  $C_1$ - to  $C_{20}$ -alkoxy, hydroxyl,  
 40 a polyalkylenyl radical or  $CH_2NR^4R^5$ , where  $R^4$  and  $R^5$  have  
 the meanings stated below, and
- $R^3$  is  $NR^4R^5$ , where  $R^4$  and  $R^5$ , independently of one another,  
 are selected from H,  $C_1$ - to  $C_{20}$ -alkyl,  $C_3$ - to  
 $C_8$ -cycloalkyl and  $C_1$ - to  $C_{20}$ -alkoxy radicals which may be  
 45 interrupted and/or substituted by heteroatoms selected  
 from N and O, and phenol radicals of the formula II

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(II)

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where R<sup>1</sup> and R<sup>2</sup> are as defined above;  
 with the proviso that R<sup>4</sup> and R<sup>5</sup> are not simultaneously H  
 or phenol radicals of the formula II; or R<sup>4</sup> and R<sup>5</sup>,  
 together with the N atom to which they are bonded, form a  
 5-, 6- or 7-membered cyclic structure which has one or  
 two heteroatoms selected from N and O and may be  
 substituted by one, two or three C<sub>1</sub>- to C<sub>6</sub>-alkyl  
 radicals; and

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R<sup>6</sup> is a radical R<sup>4</sup> or R<sup>5</sup> other than H.

4. A process as claimed in any of the preceding claims, wherein  
 an adduct having a polydispersity of from 1.1 to 3.5 is  
 obtained.

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5. A process as claimed in any of the preceding claims, wherein  
 R<sup>1</sup> has a number average molecular weight of from 300 to 850.

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6. A process as claimed in any of claims 1 to 5, wherein the  
 reaction mixture from b) is fractionated by column  
 chromatography over an acidic stationary phase by multistage  
 elution with

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- at least one hydrocarbon and then
- at least one basic alcohol/water mixture.

7. A process as claimed in claim 6, wherein the basic  
 alcohol/water mixture used is a mixture of

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- a) from 75 to 99.5% by weight of at least one C<sub>2</sub>- to  
 C<sub>4</sub>-alcohol,
- b) from 0.4 to 24.4% by weight of water and
- c) from 0.1 to 15% by weight of at least one amine which is  
 volatile at room temperature.

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8. A process as claimed in any of the preceding claims, wherein  
 the adduct mixture obtained includes from 0 to 20 mol%,  
 preferably 1 to 15 mol%, of polyisobutenylphenols from  
 reaction step a) which have not been further reacted.

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9. A Mannich adduct obtainable by a process as claimed in any of claims 1 to 8.
10. A Mannich adduct comprising at least one compound of the formula Ia and/or Ib.
11. The use of a Mannich adduct as claimed in claim 9 or 10 as a detergent additive in fuel and lubricant compositions.
12. An additive concentrate containing, in addition to conventional additive components, at least one Mannich adduct as claimed in claim 9 or 10 in amounts of from 0.1 to 99.9% by weight, preferably 0.5 to 80% by weight.
13. A fuel composition containing a main amount of a liquid hydrocarbon fuel and an amount, having detergent activity, of at least one adduct as claimed in claim 9 or 10.
14. A lubricant composition containing a main amount of a liquid, semisolid or solid lubricant and an amount, having detergent activity, of at least one adduct as claimed in claim 9 or 10.
15. The use of a fuel composition as claimed in claim 13 as a gasoline or diesel fuel.

add A 3